

## ABSTRACT

A map of site-specific amounts of a soil nutrient, to be applied in fertilizer to an  
5 agricultural field is created using a map of site-specific amounts of the soil nutrient needed to  
produce the maximum possible yield at the particular site. Subtracted from the site-specific  
amounts of nutrient needed are site-specific amounts of the nutrient currently existing in the  
field, thus producing the map of site-specific nutrient amounts to be added. The nutrient  
amounts may be added to the soil using the map and conventional variable-rate fertilizer  
10 application methods. In one embodiment, the amounts of the soil nutrient needed to produce  
the maximum possible yield at each site is created using a map of site-specific measures of  
biomass produced by the field in a past growing season or seasons, which in turn is created  
from a remotely sensed biomass image.

60034218.doc